UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,549	06/23/2003	Kenneth L. Levy	P0837	2418

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EXAMINER
NUNEZ, JORDANY

ART UNIT	PAPER NUMBER
2179	

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/602,549	LEVY, KENNETH L.
	Examiner	Art Unit	
	Jordany Núñez	2179	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

    4a) Of the above claim(s) *17-22,24,26,31,32 and 34* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,23,25,27-30 and 33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Election/Restrictions

This application contains claims directed to the following patentably distinct species:

1) Embedding video data that is imperceptible real time, but that is perceptible upon frame examination.

2) Embedding video data that is perceptible in a copy of the video captured with a video recording device, wherein said recording device includes a frame capture rate higher than a projected or displayed video frame rate

3) Embedding audio data that is imperceptible real time but that is humanly perceptible if examined in a finite segment.

The species are independent or distinct because embedding video data that is imperceptible real time, but that is perceptible upon frame examination can be done independently from capturing video with a video recording device when said recording device includes a frame capture rate higher than a projected or displayed video frame rate. Furthermore, embedding video data that is imperceptible real time, but that is perceptible upon frame examination can be done independently from embedding audio data that is imperceptible real time but that is humanly perceptible if examined in a finite segment

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1, 23, and 27 appear to be generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

During a telephone conversation with Steven Stewart on 11/24/2006 a provisional election was made with traverse to prosecute the invention of species 1. Claims 2-16, 25, 28-30, and 33 appear to belong to this species. Affirmation of this election must be made by applicant in replying to this Office action. Claims 17-22, 24, 26, 31, 32, 34 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-16, 23, 25, 27-30, and 33 rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. Independent claims 1, 23, and 27 recite steps (e.g., "embedding [] data") that do not produce a useful, concrete and tangible result. Data manipulation (e.g., "embedding data") is not a useful, concrete and tangible result. Furthermore, Examiner sees no physical transformation as a result of performing the steps recited. MPEP § 2106, "In making this determination, the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather on whether the final result achieved by the claimed invention is 'useful, tangible, and concrete.'"

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-16, 23, 25, 27-30, 33 are rejected under 35 U.S.C. 102(e) as being anticipated by

Schuman et al. (US6950532, hereinafter Schuman).

As to claim 1, Schuman shows:

A method of embedding identification data in video, the video comprising a plurality of video

frames (figure 8), said method comprising the steps of:

embedding (e.g., writing effects and security info onto content media) the identification data (e.g.,

"[d]isruption content may have a multitude of new content") in a first video frame, the embedded

identification data being visually perceptible upon examination of the first frame (figure 8, column 6, lines

24-34);

selecting a second video frame (e.g., "generated images" means that more than one image is

generated, and images can be "image frames"), wherein the first and second video frames are separate

frames (column 6, lines 24-34);

and embedding the identification data in the second video frame, the embedded identification

data being visually perceptible upon examination of the second frame, wherein the identification data is

generally imperceptible upon real-time rendering of the video (e.g., "human eye many not detect them")

(figure 8, column 6, lines 24-34).

As to claim 2, Schuman shows:

The method of claim 1, wherein the selecting step comprising selecting the second frame so that

the repetition of the embedded identification data is imperceptible to the human conscious mind when

rendered (e.g., "human eye many not detect them") (column 6, lines 24-34).

As to claim 3, Schuman shows:

The method of claim 1, wherein the identification data is embedded in the same frame location in each of the first and second frames (e.g., if a human is to perceive a message, the message has to be in substantially the same location from one frame to the next) (column 6, lines 58-67).

As to claim 4, Schuman shows:

A detection method for the video embedded according to claim 1, comprising the step of visually inspecting the first or second frames (e.g., "generated images may be captured [...] creating anomalous images") (figure 8, column 6, lines 32-43).

As to claim 5, Schuman shows:

A detection method for the video embedded according to claim 1, comprising the steps of providing character recognition of the first or second frames to detect the identification data frames (e.g., humanly perceiving the message) (column 6, lines 58-67).

As to claim 6, Schuman shows:

The method of claim 1 wherein the identification data is embedded in each of the first and second frames in the form of a digital watermark, yet the embedded digital watermarks remain visually perceptible upon examination of the first frame and second frame (column 6, lines 57-63).

As to claim 7, Schuman shows:

The method of claim 6, wherein the watermark visibility is due at least in part to watermark signal strength or intensity (column 6, lines 28-36 and lines 57-63).

As to claim 8, Schuman shows:

The method of claim 2, wherein the second frame is selected so that the repetition of the embedded identification data is imperceptible to the unconscious human mind (e.g., "human eye many not detect them") (column 6, lines 24-34).

As to claim 9, Schuman shows:

The method of claim 1, wherein the identification data comprise at least one of text, numbers, codes, images and graphics (column 6, lines 58-63).

As to claim 10, Schuman shows:

The method of claim 3, wherein the same location comprises a window (e.g., image frames) (column 6, lines 24-34).

As to claim 11, Schuman shows:

The method of claim 1, wherein the identification data comprise a plurality of identifiers (column 6, lines 58-63).

As to claim 12, Schuman shows:

The method of claim 11, wherein each of the plurality of identifiers (e.g., text or logos) is embedded to be spatially located in a separate frame location (e.g., "mark the content with messages") with respect to each other (column 6, lines 58-67).

As to claim 13, Schuman shows:

The method of claim 12, wherein the separate frame locations are the same for each of the first frame and second frames (e.g., if a human is to perceive a message, the message has to be in substantially the same location from one frame to the next) (column 6, lines 58-67).

As to claim 14, Schuman shows:

The method of claim 11, wherein the plurality of identifiers comprise a content identification (e.g., text [...] identifying content), a distributor identification (e.g., logo), copy restriction information (e.g., "copy protected"), and an exhibition identification (e.g., "time of the event") (column 6, lines 58-67).

As to claim 15, Schuman shows:

The method of claim 1, wherein the identification data comprises at least one of a content

identification, a distributor identification, copy restriction information, and an exhibition identification

(column 6, lines 58-67).

As to claim 16, Schuman shows:

A detection method for the video embedded according to claim 1, comprising the step of

averaging a plurality of the video frames including the first and second frames, wherein the averaging

improves the signal to noise ratio of the identification data to video content (e.g., disruption content is

inserted so that it " becomes visible when played [...] due to temporal expansion" when reconstructed,

thus "improve[ing] the signal to noise ratio of the identification data") (column 6, lines 33-43).

As to claim 23, Schuman shows:

A method of marking content with auxiliary data, the method characterized in that the auxiliary

data is embedded to be humanly perceptible if examined in a finite segment or frame of the content (e.g.,

generated images may contain disruption content), but is embedded so as to be humanly imperceptible

when examined as the content is rendered in real-time (e.g., "human eye many not detect them") (figure

8, column 6, lines 24-34).

As to claim 25, Schuman shows:

The method of claim 23, wherein the content comprises video (figure 8, "content media").

As to claim 27, Schuman shows:

A method of steganographically hiding data (e.g., watermarks) in media content (column 3, lines

42-49), wherein the media content comprises a plurality of segments including masking content (e.g.,

generated images) (column 3, lines 20-22), said method being characterized in that

at least two of the media segments are provided with the data (e.g., generated images) (column 3, lines 20-22),

wherein the data comprises humanly perceptible data (e.g., "inserting a human perceivable image") (column 3, lines 42-49), and

wherein the data remains perceptible upon individual examination of the at least two media segments but consciously imperceptible as the media content is rendered in real time since the data is below a perceptual threshold due to the masking content (column 6, lines 32-40).

As to claim 28, Schuman shows:

The method of claim 27 wherein the media content comprises video (e.g., generated images) (column 3, lines 20-22), the plurality of segments comprises video frames (e.g., image frames) (column 6, lines 24-34) and the masking content comprises video frames (e.g., "spaced marks [...] spaced so as to coincide") without the data (column 6, lines 16-24).

As to claim 29, Schuman shows:

The method of claim 28, wherein the data comprises an image of at least one of a hexadecimal number, binary number and decimal number (e.g., date) (column 6, lines 58-67)..

As to claim 30, Schuman shows:

The method of claim 28, wherein the data comprises an image of text (column 6, lines 58-67).

As to claim 33, Schuman shows:

A detector to detect the data provided according to claim 28, wherein the detector averages a plurality of the video frames so that the provided data becomes consciously perceptible (column 3, lines 43-49).

References to specific columns, figures or lines should not be limiting in any way. The entire reference provides disclosure related to the claimed invention.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Van Wie et al.	[U.S. 6,449,367]
Shimizu	[U.S. 6,370,272]
Rhoads	[U.S. 5,636,292]
Ashizaki et al.	[U.S. 6,829,430]
Vynne et al.	[U.S. 5,960,081]
Rhoads	[U.S. 5,841,978]

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordany Núñez whose telephone number is (571)272-2753. The examiner can normally be reached on Monday Through Friday 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on (571)272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JN
12/4/2006

WEILUN LO
SUPERVISORY PATENT EXAMINER